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TRANSPORTATION



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FEBRUARY

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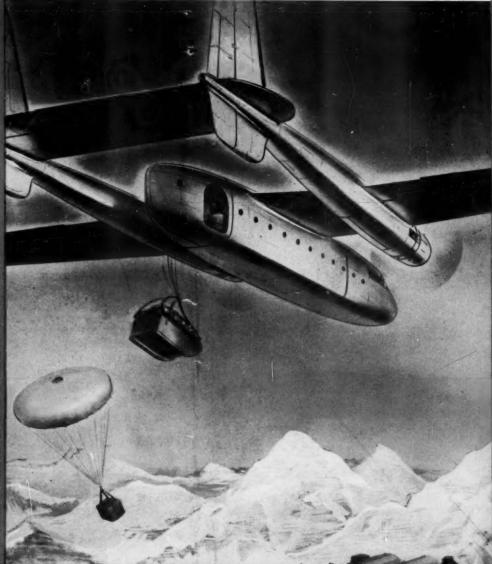
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AIR TRANSPORTATION, published once each month, thoroughly covers the entire air cargo industry for the benefit of all those engaged in shipping and handling domestic and international air freight, air express, and air parcel post, as well as using the domestic and international air mail services. Included in AIR TRANSPORTATION'S wide coverage are: air shipping, cargoplane development, rates, packaging, materials handling, documentation, air cargo terminal development, insurance, routing, interline procedures, new equipment, commercial airlines, military air transport service, air freight forwarders, personnel.

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COVER

Brooks and Perkins, Inc., of Detroit, presents its artistic take-off of an air-freighter in action somewhere in the Frazen North.

THE BALTIC LAST YEAR

THE year 1950 has witnessed the continued expansion of the air freight market on the Baltic Exchange and its influence and prestige have been felt over an ever widening sphere. The Airbrokers Association has been intimately concerned in this expansion, and is now represented on the Civil Aviation Consultative Council. Several provincial firms have become members of the association, and the institution of the Daily Market State whereby information concerning cargoes and aircraft offering is circulated to all members of the association. has enabled member companies outside London to maintain an up-to-the-minute knowledge of the market which is essential for the further development of air chartering. The corporations have assumed a more active role on the exchange, and it is to be hoped that the good will established thereby will be reflected in increased cooperation to the mutual benefit of the state airlines. the charter companies, and brokers.

There can be little doubt that the great increase in the number of charters concluded for the movements of ships' personnel has been the result of the shipowners' ready appreciation of the saving in time and money that air transport can effect, and the close contact between charterer and broker which is a feature of the Baltic Exchange. The exchange of fresh crews for seamen whose articles have expired and the ferrying of personnel for newly delivered tonnage provide the main demand. Repatriation of Chinese and Lascars also enables the charter aircraft to be of service, and one of the repatriation flights arranged by us during the year under review was of the crew of a ship gutted by fire.

The majority of ships' crew traffic has been between this country and India and the Far East. The distances involved, as well as the number of seamen to be moved at one time, normally between 35 and 50, has meant that this traffic has been limited to the larger aircraft, and on many occasions the regular airlines have been able to offer competitive rates, with all the facilities provided that are normally at the dis-

posal of their scheduled services. This type of business also enables the regular airlines to utilize aircraft which might otherwise have no employment.

At the same time there has been no lack of short-haul ships' crew business, and in this sphere the charter companies are at an advantage, as the numbers to be moved are usually less and therefore ideal for such aircraft as Vikings and Dakotas. Scandinavian owners in particular have made great use of charter aircraft when moving personnel to take delivery of new tonnage in United Kingdom ports.

Marine Customers

Although the cost of air charter may, at first glance, appear to be high there are occasions when a shipowner may save himself thousands of pounds by virtue of the ability of an aircraft to deliver essential spares in a matter of hours, where surface transport might take weeks, thus cutting to a minimum the time that a ship is out of commission. Here again, the proximity of charterer and broker enables quick decisions to be made, and an aircraft to be despatched within a few hours.

During the past year we have arranged such heavy lifts as a seven-ton tailshaft from Amsterdam to Mauritius, a 4½-ton rotor from a turbo-electric tanker from Abadan to Amsterdam for rewinding and redelivery to the Persian Gulf, and a 4½-ton rudder stock from Prestwick to Singapore. The comprehensive network of the regular airlines is complementary to this service in that it enables small items to be delivered to any port of the world within a few days.

Many charter companies have been engaged during 1950 on contract work, entailing the movement of personnel and their families to and from their places of employment oversea.

The shortage of shipping accommodation was primarily responsible for the adoption of air transport for Leave Schemes to and from West and East Africa and Tripolitania, both Government-sponsored and otherwise, and there is little doubt that the great sav-

ing in non-productive traveling time and the comfort and ease of a swift and trouble-free journey, will lead to an expansion of this form of traffic. The worsening of the political situation in the Far East has brought the Service Ministries into the market, though numbers to be moved has usually resulted in BOAC being called upon to supply the aircraft.

The Air Ministry has made widespread use of the charter companies, not only for short-stage work within the United Kingdom and Northwest Europe but also to West Africa, Egypt, India, Singapore, and Hong Kong.

In this connection we would mention the formation of Transport Squadrons in the Royal Auxiliary Air Force, whereby employees of various charter companies are being formed into units ready to comprise the nucleus of a vastly expanded Transport Command which would be essential should an emergency arise.

Pilgrims from all over the world make use of air transport to attend the Holy Year Celebrations in Rome, and numerous charter flights were undertaken from the North Americas and the United Kingdom to Italy. We ourselves arranged a number of pilgrimage flights from this country during the Summer and over the Christmas Holiday. Moslems making their pilgrimage to the Hejaz also made use of air transport, and numerous operators were employed on this traffic . . .

Many operators found active employment at weekends throughout the past Summer operating flights in conjunction with inclusive tours . . .

Although the seasonal fruit traffic that formed a large part of the charter business of 1947 and 1948 was again not available, there has still been a large amount of business for those companies operating freight aircraft.

Considerable quantities of textiles have been flown from France to this country, and there has been a steady traffic in chemicals from the United Kingdom to Northern Italy; in many instances it has been possible to fix return loads from Northern Italy to

(Concluded on Page 19)

Colombia's Cordilleras Have Made Skyfreighting a Natural

By JUAN UCROS

Special Representative
Avianca

A VIANCA—Aerovias Nacionales de Colombia—and aviation in general, have three good friends in Colombia. These are the three roughly parallel cordilleras, or mountain ranges, which split the country into a variety of sections and climates, and make the transportation of people or supplies by surface methods incredibly difficult.

Colombia, with an area of 439,830 square miles, and a population of 10,777,000, has over 60 airports, and a network of air routes covering every part of the country. Twelve major cities and a number of smaller ones have a highly developed and active commerce among themselves and with foreign countries, and it is safe to say that without aviation, this commerce would practically come to a standstill.

Many of these cities, only a few hours apart by air, are days or weeks apart by surface travel, so Colombians have always been air-minded. The construction costs of railroads or highways are so high that today Colombia has only 2,106 miles of railroad, and 7,700 miles of paved highway—this in a country with almost twice the area of the State of Texas!

Fortunately, there is a network of navigable rivers, and in the past most of the country's freight moved on them. It was the slowness of this method of travel, however, which pointed up the advantages of air transport. Indeed, prior to the coming of commercial aviation, there were all sorts of experiments with power barges, shallow-draft boats driven by air screws, and suspension railways—none very successful, so that when the airplane came to Colombia, it received an enthusiastic reception, and there was no lack of investors prepared to risk capital in this new venture.

Thus the growth of commercial aviation in Colombia was rapid. The airplane was more than a curiosity or a toy. It was a means of rapid travel for the businessman with interests in various parts of the country, and perhaps more quickly than in other parts of the world, its potentialities as a carrier of mail and general cargo were investigated and developed.



The first commercial flight in the Americas, carrying passengers, general cargo and mail, took place in Colombia on October 19, 1920. On this date, Scadta, which later became Avianca, began a flight from Barranquilla to the river port of Girardot in a single-engine Fokker hydroplane.

Carrying four passengers and approximately 300 pounds of mail and cargo, the little plane made the trip in two hops. Four-and-one-half hours from Barranquilla, a refueling stop was made at Puerto Berrio. The townspeople's enthusiastic reception induced passengers and crew to overnight at the town, so the flight proceeded to Girardot the following morning. Total elapsed flying time was eight hours—not fast by today's standards—but the flight proved the feasibility of commercial air opera-

tions over the Andes, and the desirability of such operations—as Barranquilla and Girardot are to this day one week apart by boat.

From this humble beginning, Colombia's aviation grew, and with it Colombia's commerce. Today, three Colombian airlines offer passenger and cargo services within the country, and to the United States and Europe. Avianca alone operates more than 30 airports in Colombia, flying some 17,000 unduplicated route miles within the country, and almost an equal number abroad.

An astounding variety and quantity of products move by air in cargo and mixed cargo and passenger services. Colombia's big textile industry ships much of its product by air, and conversely, personnel and technicians, machine parts, and in some instances raw wool or cotton reach the mills by air transport.

Bogota, the country's capital, is 450 miles from the sea, but fresh seafood is on the menu of every Bogota restaurant daily, brought up to the city by air. The fruits, vegetables, and flowers of Colombia's tropical lowlands are air-carried to the mountain cities, which in turn, send their cooler weather agricultural products back to the lowlands. Concrete pipe, steel reinforcing bars, the

(Concluded on Page 19)

Exactly 16 months ago Air Transportation brought you its first story on Australia's Air Beef scheme. Experience has been gained and traffic has multiplied, and all this results in . . .

More on Air Beef

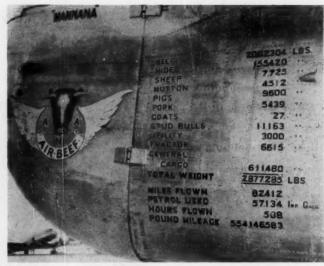
In the five months between May and September, 1950, a Bristol Freighter aircraft flew more than 2,000,000 pounds of beef—over twice the output of the preceding year—from the Glenroy Abbatoirs of Air Beef Pty. Ltd. to the shipping center of Wyndham, North Australia. This achievement brought final confirmation of the practical value and great potentialities of a scheme which for 15 years had been the unrealized dream of a few Australian pioneers.

The vast area of Northern Australia known as the Kimberlevs is potentially one of the richest cattle-producing areas in the world, but its development has been hamstrung by the impossibility of providing adequate land communications at economical cost. The only means of bringing cattle to the shipping centers was to drive them hundreds of miles over arduous stock routes to coastal abbatoirs. In the best of seasons, the stock routes took a heavy toll. Cattle coming from properties free of the cattle tick would suffer heavy losses when they entered tick-infected areas en route, and so on.

Apart from disease, however, it was impossible to keep the cattle in prime condition throughout a long drive. From Glenroy to Wyndham is only 70 minutes by air, but it takes more than a fortnight in driving time. During that time, each beast may lose up to 100 pounds or more. Multiply an average loss of 80-90 pounds by the number of beasts in one mob and then by the number of mobs converging on Wyndham in a season, and the total is considerable.

But to develop even a rudimentary road system would cost millions of pounds, a railway system would be even more costly. To bring either to peak efficiency would be a huge undertaking, demanding many years of work. No such difficulties face the introduction of an air transport network. Many airfields already exist; others can be built quickly and cheaply.

As long as 15 years ago, I. H. Grabowsky—now planning and development manager of Australian National Air-



A BRISTOL FREIGHTER proudly displays its record for a five-month period.

ways and one of the chief protago nists—was advancing the idea of an "Air Beef" organization. Not until 1947, however, did the plan reach the stage of practical trial. Even then, no more than a crude experiment was attempted, four beasts being slaughtered near the airstrip at Mount House cattle station and the meat flown to Perth by a MacRobertson-Miller aircraft.

Forming Air Beef

In 1949, the scheme we given scope and shape by the formation of Air Beef Ptd. Ltd., the principal shareholders being Australian National Airways, the MacRobertson-Miller Aviation Co.. Gordon Blythe (who, with his brothers, owns the Mount House property), and a number of farmers in the Glenroy area. Financial encouragement was given by the State Government, and the establishment of a center was begun at Glenroy.

All machinery, plant, and buildings needed for the slaughter house, chilling chambers and domestic quarters had to be taken out by air. The air-strip itself cost only £100 to construct, the 8,000-foot runway being simply scraped out of the flat land. Cost of the Glenroy center as it stood in 1950 was estimated at £35,000.

During 1949, 1,800 beasts were slaughtered at Glenroy and the meat was flown to Wyndham, 180 air miles to the southwest. There were many setbacks and difficulties, but the experiment was sufficiently successful to lead to enormous development in 1950.

One major improvement was the introduction of the Bristol Freighter. The nose-loading doors were an immeasurable advance on the side-loading facilities of earlier aircraft, and the aircraft was able to operate from the existing airstrip with a load of nearly six tons, equal to about 20 carcases.

Another great encouragement was the award of a Government subsidy of (Continued on Page 20)



HE world's newest nation. Israel—now generally recognized as an oasis of Western civilization in the Middle East—is progressing with astonishing speed. Peopled by new citizens who, for the most part, have come from the great cities of the Western countries, or who have fled from the Iron Curtain countries, Israel operates under a form of government based on that of the United States.

An excellent mirror of Israel's progressive vitality is its national airline, El Al. The pioneering spirit is manifest even in the carrier's name: a direct translation of El Al is "Onward and Upward." Although the airline is Government-owned, investment of private capital is permissible; indeed, it is urged.

For some months El Al has been operating non-scheduled cargo and passenger flights between New York and Lydda, the airport of Israel. Next month, the airline inaugurates twice-weekly scheduled service between the two points, with an interim stop at London. This run will be operated with de luxe Constellation aircraft accommodating 57 passengers and a large quantity of freight.

Europe and Africa

El Al's international service is not confined only to the Israel-United States route. The line's fleet of 13 two- and four-engined transports also serve such European points as Paris, Zurich, Vienna, Athens, and Istanbul. Its African service takes in such important centers as Khartoum, Nairobi, Livingstone, and Johannesburg. Currently El Al is flying some 36,000 miles a week in its European and African services—all with a perfect safety record. Flight and maintenance crews are principally American, with Britons and Scandinavians rounding them out. El Al has applied for IATA membership.

Cargoes Follow

It is axiomatic that traveling salesmen and negotiators precede air cargoes. The deal comes first; the shipment follows. This is quite evident in the comparative freight statistics for the January-May period in the years 1949 and 1950. In the first five months of 1949 a total of 143,415 pounds of air imports was recorded, with air exports at 71,141 pounds. However, in the same period a year later, Israel's air imports skyrocketed to 722,577 pounds and air exports to 383,528 pounds.

At the present time Israel is furiously buzzing with activity. A land is being built from almost scratch. Of course, passenger travel to and from the Holy Land will boom; but the future history of El Al will follow the histories-to-be of air carriers the world over. Like the ocean-going vessels and the railroads, most of its traffic will be in freight, and most of its revenues will come therefrom—especially El Al, which represents a rapidly industrializing country entering into the pattern of world commerce.

Up to now the types of cargoes outbound to Israel have been indicative of the reconstruction era: machinery for the manufacture of knitgoods; replacement parts; accessories for a large variety of vehicles; etc. Then, too, there are drugs and pharmaceuticals, and, of course, food parcels. Several months ago, Air Transportation reported on El Al's haul of a special edition of United Nations World—several thousand pounds of it—to Israel, and made available to readers in that country at about the same time they were first seen here.

Inbound the freight consists principally of sample goods. These usually are accompanied by salesmen; and, as pointed out a couple of paragraphs back, the salesmen and their samples will generate the full cargoes of tomorrow.

Cargo Chief

Guiding the destinies of the Israeli airline's cargo department in the United States is Charles H. Vasseur, a veteran of the Sixth Marine Division, who has seen action at Guadalcanal, Guam, and Okinawa. Gravitating toward air freight after the war, he joined Flamingo Airlines, a nonsked outfit, where he received much of his practical experience. The anything-anywhere-anytime nature of Flamingo, with its diverse nature of freight-Maine lobsters to The Morning Telegraph-was an excellent education. Following that airline experience. Vasseur moved to such forwarding firms as Air Express International Agency and All Air Freight Company before becoming associated with El Al.

THE EXPERIENCE AND ERRORS OF SURFACE TRANSPORTATION ARE

Air Cargo's Gain

By L. R. HACKNEY

Air Cargo Sales Engineer, Lockheed Aircraft Corporation

CONCLUSION

THE Aerobridge is the necessary adjunct to the material handling flow that permits bridging the gap between the airplane and the terminal. It permits utilization of the same practices and material handling methods which are so successfully used in rail and motor transportation.

The Aerobridge, as manufactured by Airquipment, provides a portable, selfpowered, flexible means whereby air freight carried by wheeled conveyances, or passengers, may be conveniently transferred into and out of an airplane which has been taxied to a position adjacent to the freight dock or passenger terminal. This function requires that the bridge be adjustable as to both length and height. It is selfpowered for rotation through an arc of 180° and also for translation along the air terminal, airplane ramp area. The Aerobridge, which has an unobstructed width of eight feet and a basic length of 70 feet with an additional 15 foot extendable section on the airplane side, is sufficient to adequately handle any existing air transport today. This includes airplanes the size of the C-97 and C-124. It is designed for terminals with a floor height at the airplane dock side of 100 or 108 inches. It is assumed that the truck court side will be graded and ramped up giving a dock height of four feet. This permits cargo to be directly handled from the end gate of the pick-up

and delivery truck, to the dock, through the system, then into the airplane on practically the same level. It is this feature that can provide reduction so necessary in handling costs.

Analysis Made

The principle of the Aerobridge has been discussed in detail and analyzed by several groups in the air transport industry. Recently an analysis was made of utilizing the Aerobridge at a freight terminal of one of the larger airlines. This freight terminal normally handles three in-coming and three out-going DC-4 airfreighters daily. Through use of the level loading principle, the airline's industrial engineer and station manager determined that they could save \$21,000 a year in direct labor alone. This did not take into consideration the investment in capital equipment. Part of their present cargo handling equipment could be transferred to other stations. It was also their industrial engineer's opinion that with experience the saving could be increased by an additional

This saving in manpower would result in no increase in airplane loading time, actually a slight reduction. Other advantages, such as more careful handling and less chance of damage, would result. If a terminal which handles only six airplanes a day can save

\$21,000 a year in labor alone, a good estimate can be made of the economies resulting with larger terminals and increased volume.

Pacific Freight Lines, in its operation, handles over 3,000,000 pounds of freight each night across its Los Angeles terminal dock. It has found the use of the bar handle truck with telescoping mast and conveyor hook in conjunction with the overhead trolley conveyor system to be the most efficient. Incoming freight is offloaded from the city pick-up truck directly onto the tow mast, and truck. As the load in the city pick-up truck diminishes, the hand truck is wheeled across a deck board directly into the motor truck thus reducing to a minimum the distance that the cargo handler must physically handle packages. The hand truck is then moved a distance of not over 20 feet and connected into the overhead dragline conveyor system. It then makes the circuit and is disconnected on the opposite side, where it is hand pushed approximately 25 feet into the out-going line haul truck.

The pick-up and delivery side of PFL's operation may be considered little different than what the air freight pick-up and delivery will be as it grows in volume. The long-haul or line haul large semi-trailer trucks, which are spotted on the opposite side of the terminal dock, literally become

(Continued on Page 19)

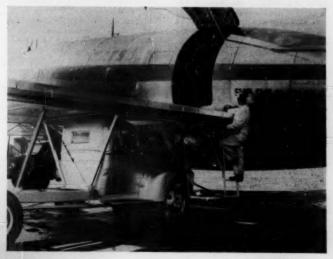
These days increasing attention is being given to helping along the speed of the airfreighter by doing something tangible about the handling of air cargoes on the ground. One of the latest developments is the Cargo Ready-Load, developed by Jack S. Nelson, owner of the Kansas City, Missouri, firm, Air Cargo Terminals; and manufactured and distributed by the Crimsco Manufacturing Division of Truog-Nichols, Inc., of the same city. The Cargo Ready-Load is another worthwhile method in . . .

More Speed

SHOWN in this picture are two Cargo Ready-Loads... one loaded with freight, and the other waiting for a load. The fork lift at the left is used to unload freight from the Cargo Ready-Load and bring it down to ground level after the plane has departed.



ILLUSTRATED here is the Cargo Ready-Load positioned at the cargo door of a Slick Airways freighter. Note the floor-level convenience which facilitates loading and unloading procedures. Cargo may be prepared in advance of the plane's landing and later moved into the aircraft with a minimum of delay. Similarly, shipments offloaded for transloading aboard another plane may be kept on the Cargo Ready-Load until the arrival of the second aircraft.



FEBRUARY 1951-PAGE 9

United States Overseas Air Cargo Services

By N. W. KENDALL

Transportation Division
Office of Domestic Commerce
United States Department
of Commerce

PART XI

OST of the irregular carriers included in table 33 published last month are relatively small companies, though two have assets and personnel which compare favorably with many scheduled airlines. Table 34 summarizes pertinent information with respect to headquarters, type and area of service, equipment, assets, personnel, and revenue of large irregular carriers included in the preceding table. Blank spaces indicate unavailability of data.

Of 17 companies reporting assets, 12 had total assets of less than \$100,000; 4 of between \$100,000 and \$1 million: and one of more than \$3 million. The two largest carriers-Transocean Air Lines and Seaboard and Western Airlines-employed a total of 836 and 113 personnel, respectively. All but two of the remaining 17 companies reporting personnel employed 31 of fewer persons. Ten reporting carriers had total revenues during the third quarter of 1948 of less than \$100,000 and three additional carriers of less than \$200,-000. The two largest carriers mentioned above had total revenue of \$1.9 million and \$0.9 million, respectively.

Information on profit or loss of irregular air carriers is not shown here, partly because a series of abnormal factors have caused great variation from period to period in the financial results for individual carriers, and prevent firm conclusions with respect to that aspect of their operations. It is noteworthy, however, that some airlines, besides transporting persons and property, conduct other operations which contribute to increased revenue. Transocean Air Lines, one of the leading examples, in addition to its flight operations, has

engaged in reconditioning of Air Force planes used in the Berlin airlift; airport construction and installation of landing aids; and operation of a flying school offering approved courses in piloting, navigation and flight engineering.

Volume of Traffic

Table 35 (next month) sets forth revenue tons of cargo carried, revenue ton-miles of cargo service performed and revenue plane-miles flown for 12 large irregular carriers which reported such data for all quarters of 1948. Third quarter data for a few additional irregular carriers were presented in table 23. Table 35 provides a useful summary of operations of a group of the irregular carriers, and, by comparison with table 27, permits a comparison of the ton-mile volume of service rendered by individual United States certificated and noncertificated carriers. In making such comparisons, it should be remembered that the data for some of the irregular carriers include operations within continental United States, even though, in general, the carriers shown operate chiefly to and from continental United States in their cargo services.

Characteristics of Service

Most of the large noncertificated irregular carriers under consideration in this report have combined cargo carriage with passenger carriage. Passengers have been transported between points in continental United States and between continental United States and United States territories and possessions under common-carrier authority granted through Letters of Registration, and

have been moved on a non-common carrier or contract basis between the United States and foreign countries. A few of these carriers, however, have engaged almost exclusively in the carriage of cargo to and from continental United States. The largest such carrier is Seaboard and Western Airlines. Information obtained from an interview with an official of that company in November, 1948, together with tariffs filed by the carrier with the CAB and other material prepared by the carrier, furnishes the foundation for part of the following description of "Irregular" or nonscheduled United States overseas air cargo services. Reference will be to Seaboard and Western unless otherwise specified.

The most readily apparent difference in the character of United States overseas air cargo services rendered by certificated and noncertificated carriers lies in the nature of the traffic carried. Certificated carriers render relatively few scheduled all-cargo services; and the volume of their nonscheduled cargo service is small compared to scheduled operations. Accordingly, most of the cargo offered by shippers to certificated carriers must be moved in conjunction with passengers on scheduled combination passenger-mail-cargo flights. Since the capacity for carrying cargo on passenger planes is limited, and because rates per pound are not graduated downward in proportion to the weight of shipment, the certificated carriers' cargo services are utilized primarily for consignments of low weight. A shipment of heavier weight than could be accommodated in the cargo compartment of a passenger plane often would have to be broken down into two or more separate consignments which would move on different flights.

In contrast, the noncertificated irregular carrier of cargo exclusively, offers planeload, rather than less-than-planeload, service, in which shipments weighing up to the maximum load which the aircraft can carry are accepted. During one month in 1948, the average weight per shipment via Seaboard and Western was 885 pounds. The following instance of a typical planeload, obtained from six shippers, was cited.

While several of these shipments might have been of sufficiently low weight to move in passenger plane service, many shipments are of such shape, size or weight that if shipped by air,

(Continued on Page 22)

YOUR **EXPRESS**

AIR CARGO SKYROCKETS

Planes Help Flood Victims in India And in Pakistan

WASHINGTON, D. C.—Heavy floods in the Kashmir and Punjab areas of India and Pakistan have prompted a rush of airborne relief from the United States, through the cooperative efforts of the Department of Defense and the War Relief Services-National Catholic Welfare Conference.

United States Air Force aircraft transported four tons of relief supplies, including blankets, medicines, and footstuffs, as the result of urging by the American Embassies at New Delhi and Karachi. The State Department said that "the supplies will be distributed to the unfortunate people in the stricken areas of India and Pakistan."

In October, 1950, when Assam, India, suffered a severe earthquake, the USAF and American Red Cross sent a similar relief air shipment.

CAB Warning to Meteor

WASHINGTON, D. C. — Meteor Air Transport, a large nonsked headquartered at Teterboro, New Jersey, has been ordered to cease and desist from economic violations of the Civil Aeronautics Act. (Concluded on Page 13)

Year-End Reports Show That More And More Shippers Turn to Air

NEW YORK—As increasing numbers of domestic and international air carriers file their reports for the year 1950, it becomes progressively apparent that the year just ended has proved to be another banner year for the carriage of air cargo, and has brought a few steps nearer the day when cargo revenues will at least equal passenger revenues. Full totals for all the carriers are, of course, not yet available; nevertheless, the picture is clear.

Pan American World Airways reports that it handled the greatest volume of traffic last year, including some 50,000,000 pounds of cargo. In addition, a total of

More Points in Mexico Served by Air Express

NEW YORK—Two hundred and eighty-three Railway Express Agency offices in every state of the Union and seven additional offices in Canada have been designated to accept and handle air express shipments destined to the Republic of Mexico, via Aero Transportes, S. A. Thirty-three Mexican cities will be served.

REA said that international air express shipments destined to Mexico must have three copies of a commercial invoice, four copies of the Shippers' Export Declaration, and a Shippers' Letter of Instructions. Thus shipments are to be addressed in care of ATSA Airlines, Brownsville, Texas. NEW YORK-Two hundred and eighty-

pounds of cargo. In addition, a total or 4,054,763 pounds of essential military cargo was transported. Noteworthy of Pan Am's commercial record was the fact that the new record was "achieved at a time when 10 percent of the company's four-engined fleet and a larger amount of the time of its executives and employees was devoted to the Korean airlift."

devoted to the Korean airlift."

Similarly, American Airlines' freight, express, and mail traffic set new all-time highs. Air express, which showed the greatest increase, rose 31 percent from 5,500,000 ton-miles in 1949 to 7,300,000 ton-miles last year. Air freight increased 12 percent, despite the fact that more than 50 percent of American's airfreighter fleet operated in the Korean lift. An estimated total of 36,868,163 freight ton-miles was flown in 1950 as compared with 32,961,422 ton-miles during the previous year. The air mail totals were higher in 1950 by 10.5 percent. Air mail totals showed better than 10,000,000 ton-miles in contrast to 1947 s, 9,057,965 ton-miles.

Thomas L. Grace, president of Slick Air-

1949's 9,057,965 ton-miles.

Thomas L. Grace, president of Slick Airways, whose company hauled 45,657,828 ton-miles of freight last year (which is 88 percent above the total for 1949), believes that Slick has established a new world's record for commercial air freight. Average daily utilization of its 22 C-46s was 7.6 hours in 1949. In December alone, Slick's best mouth in history, aircraft utilization was a fraction under nine hours a day. That month 5,679,720 ton-miles were flows.

National Airlines, which has naid the

Mational Airlines, which has paid the first cash dividend in the company's 16-year history, also has shattered all its records. President G. T. Baker has stated that National has nearly doubled its cargo tennage and has become "the fastest growing airline and has become in the nation."

Seaboard and Western Airlines carried 3,583,437 freight ton-miles over its trans-atlantic route last year, plus 5,881,108 ton-(Concluded on Page 18)

BOAC's Record Shows That 1950 Was a Pretty Good Twelvemonth

NEW YORK-The most interesting thing about the year just passed, as far as British Overseas Airways Corporation is concerned, is that the airline, at one point, moved out of the red ink and into the black-a less attractive color, but a far more preferable one. BOAC has listed its achievements during the year in this manner:

(1) Total traffic receipts hit an all-time high in August and transatlantic

operations showed a profit for the first time.

(2) The following month, an operating account profit was made for the first time—a month during which a passenger record

(3) January-September, freight traffic averaged 12.7 tons per day, in contrast to 11 tons per day in 1969.

(4) Conversion of BOAC's trunk routes to operation by fully pressurized postwar aircraft was finalized.

(5) Such new aircraft as the Strate-

cruiser and Hermes were introduced.

(6) New services were established between London and Santiago, Chile, via South America's East Coast; and between London and Johannesburg, via Africa's

West Coast.
(7) Direct Stratocraiser service between New York and Nassau was inaugurated, and New York-London nonstop flights were

FERRUARY 1951-PAGE 11

FAST. CAREFUL. DIRECT Arrow Airways' Letter



ALL EUROPE THE MEAR EAST THE BELGIAN CONGO **SOUTH AFRICA**

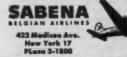
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Of Registration Revoked

WASHINGTON, D. C.—Effective February 15, the Letter of Registration held by Arrow Airways, a large irregular air carrier, with headquartes at Burbank, Californis, will be revoked by the Civil Aeronautics Board. After that date Arrow has been ordered to cesse and desist from engaging directly or indirectly in air transportation. The nonskid was found to have conducted a regular coast-to-coast service and to have held itself out to the public as conducting a regular service in violation of Section 401(a) of the Civil Aeronautics Act. The Board said that the airline's "attitude has been one of defiance, or at least studied indifference."

Dollars Collectible In Managua, TACA Reports

NEW YORK—In a circular letter sent to shippers by Alvin C. Schweizer, Eastern traffic manager of TACA International Air-linea, it is pointed out that "freight charges and other charges, including the TACA transportation charges, can be collected in United States dollars in Managus, Nicaragus." The airline will accept shipments with all freight charges collect, or other charges collect, and these will be collected in dollars if such is specified. Schweizer stated that it would be necessary to note the following on the airwaybill: "To Be Collected in U. S. Dollars." All other charges must be prepaid.

Skeds Contributed Heavily To Korean Lift, Says ATA

WASHINGTON, D. C.—Approximately 70 percent of the daily airlift of commercial places provided by the scheduled airlines of the United States during the Second World War, was furnished to the Korean airlift in the early months of the war across the Pacific. This was pointed out by Robert Ramspeck, executive vice president of the Air Transport Association, at an ATA membership dinner here.

Ramspeck stated that in the first four months of the lift, the skeds' planes completed 596 round trips across the Pacific, operated 36.924.077 ton-miles, and hauled more than 5,584 tons of military cargo.

more than 5,584 tons of military cargo.

LAV Now Serves Peru

NEW YORK-Rafael Arrais, president of NEW YORK—Rafael Arraia, president of LAV, the Venezuelan Airline, has announced the extension of Constellation service from New York to Lima, Pera, via Havana and Caracas. LAV'S expanded run is the result of a bilateral agreement between the Governments of Venezuela and Peru. The first and only non-stop air service between the capital cities of both South American countries, it will be operated by the El Libertador flight.

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AMA Says 1951 Packaging Show to be 25% Larger

ATLANTIC CITY — Scheduled to be held in the Auditorium here on April 17-20, the twentieth annual National Packaging Exposition is expected by the American Management Association, sponsor of the important event, to be about 25 percent bigger than last year's show. According to the AMA, the national conference on packaging, packing, and shipping will consume the first 2½ days of the event. The 1950 exposition was held at the Navy Pier in Chicago.

Leopoldville Office Is Opened by Sabena

LEOPOLDVILLE, BELGIAN CONGO— A new office has been opened here by Sa-bena Belgian Airlines. It is located in the Singer Building, 7 Boulevard Albert I. Air freight is bandled here as well as pas-senger ticketing.

S&W Leases Warehouse

NEW YORK—A one-story warehouse at 155-57 Attorney Street, Manhattan, has been leased by Seaboard and Western Airlines. International freight will be received here instead of the former location at 211 Water Street. Handling of shipments will be reduced to a minimum by the location of 5,000 square feet of space on one floor.

TWA's Connies to Get **Jet Exhaust Systems**

NEW YORK — Cargo aboard TWA's Model 749 and 749A Constellations will receive the benefit of some 11 miles an hour more speed as the result of jet exhaust systems with which the aircraft will be equipped. The jet stacks, which restrict the exhaust gases, thus increasing velocity, will reduce fuel requirement on a 2,500-mile flight by approximately 1,100 pounds. Consequently, payload of the ship will be increased.

SAS Opens Cleveland Office

CLEVELAND—A new office has been opened in this city, headed by Edward G. Bongstrom, special sales representative. Borgstrom will hold sway over all of Ohio, northern New York State, Pennsylvania, West Virginia, and Ontario, Canada. The office is located in Room 536, 629 Euclid Avenue.

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EVEN FURNITURE GOES BY AIR



Part of the first major shipment of California-manufactured furniture, flown to dealers in Chicago and New York by the Flying Tiger Line. The result of a deal with the Furniture Manufacturers Association of Southern California, the Flying Tigers are handling furniture shipments much in the manner of roil pool are freight. The air freight pool is limited to members of the FMA. It is understood that Eastern furniture dealers ordering from Southern California manufacturers are taking advantage of the pool rates by specifying air shipment in their orders. The initial shipment totaled 8,222 pounds, a little more than helf of which was offloaded at Chicago. Note the lift truck in action at planeside.

Pan Am Would Serve Samoa

WASHINGTON, D. C.—Air service between American Samoa and the mainland of the United States is being sought by Pan American World Airways. American Samoa would become a stop on Pan Am's route between the co-terminal cities of Loe Angeles-San Francisce and Sydney, Australia-Auckland, New Zealand.

Attention!

Because of the lateness in returns of our International Airline Cargo Rates from the various sources, these do not appear in this issue. However, publication of the rates will be resumed in the next issue.

3 More Airlines in ATA

WASHINGTON, D. C.—The Air Transport Association reports that at the annual meeting of its Board of Directors three additional scheduled afrince were admitted to membership: Central Airlines, Ozark Air Lines, and Resort Airlines. The addition of these carriers has brought ATA memberships. ship to 40

CAB Warning to Meteor

(Continued from Page 11)

After investigation, the CAB found that Meteor had knowingly and willingly "conducted operations as a common carrier in excess of those permitted" under existing regulations which cover the carrier. The Board stated that it was "not disposed to employ the drastic remedy of outright revocation of Meteor's Letter of Registration," and that it has decided instead "to adopt the device of a cease and desist order prohibiting specific violations."

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Air Transport Association: New Board of Directors consists of R. M. Love, All American; C. R. Smith, American; T. E. Braniff, Braniff; J. H. Carmichael, Capital; E. V. Rickenbacker, Eastern; George E. Gardner, Northeast; J. T. Trippe, Pan Am; W. L. Piersen, TWA; and W. A. Patterson, United . . . Les Barnes has been appointed director of operations in the Operations and Engineering Department . . J. J. George elected chairman of the Meteorology Committee . . . C. B. Newman and Ralph R. Thiele appointed to the Military Bureau of the Air Traffic Conference.

Aircraft Industries Association of America: E. B. Newhill succeeds La Motte T. Cohu as chairman of the Board of GOVETDOES.

American Airlines: L. C. Fritz, vice president-operations, has returned to his duties following an illness . . Donald L. Urguhart has been named manager of

Braniff International Airways: Thad M. Dyer has taken over the post of traffic manager at Corpus Christi, Texas.

Civil Aeronautics Board: James M. Verner has been appointed acting executive director . Charles I. Longacre named special assistant to Chairman Delos Rentzel . . . Gordon M. Bain now aerves as director of Bureau of Operations.

Eastern Air Lines: One of the best-known men in commercial aviation, William Van Dneen, has joined Eastern as a vice-president, serving as special assistant to Eddie Rickenbacker.

El Al: Myron E. Hoffman, formerly manager of United Air Lines' New York Mercantile Division, named assistant to Major Yehuda Koppel, commercial representative for the Americas.

Flying Tiger Line: Ralph B. Stump, elected assistant secretary-treasurer Walter F. Bowman now serving as district sales msnager at Cleveland . . . Roy Haworth named station manager at San Franciaco.

Frontier Airlines; Brooke B. Burnham and Robert M. Evans, appointed assistants to the vice president-traffic and sales. Linea Aeropostal Venesolana; Rafael Arraiz, for the past two years manager of the New York office, mand president of the entire company. He among president of the entire company. He is succeeded in New York by Luis Navas.

Lockheed Aircraft Service-International: Philip M. Willcox, formerly vice president of United and TACA, elected a vice president of United and TACA, elected a vice president of this firm.

Glenn L. Martin Company; Richard W. Darrow, director of public relations, selected by the Baltimore Junior Association of Commerce as the "most sustanding young man of the year."

Mid-Continent Airlines: Jack R. J. Davis appointed supervisor of route development . . . William H. Fobes, Jr., now Northern region manager of traffic and sales . . Robert K. Miller named sales prometion manager.

Northwest Airlines: James Farrell appointed Orient sales manager, with headquarters in Tokye . . Robert L. Dudley named Philippine sales manager.

Pan American World Airways: Harold Swit has taken over the post of district traffic manager at Ciudad Trujille.

Panagra: Kenneth A. Lawder elected a vice president and comptroller.

Panagra: Kenneth A. Lawder elected a vice president and comptroller.

Panagra: Kenneth A. Lawder elected a vice president sanufacturing.

Ploneer Air Lines: Robert L. Polvado appointed district traffic and sales manager at Fort Worth and Abilene, Texas.

Railway Express Agency: H. P. Dunlap named vice president, Executive Department.

Scandinavian Airlines System: Gun-

lap named vice president, Executive Department.

Scandinavian Airlines System: Gunnar Sandberg appointed sales representative for the Detroit area. . . Jay Haymond now serving as sales representative in the San Francisco area.

Slick Airways: Stanley Marcus, executive vice president of Neiman Marcus, Dallas, now a member of Slick's board . . . David M. Graham named Midwestern sales manager . . . Jack Sharpe, new district sales manager in Dallas, and Bob Strong succeeding him as district sales manager in the same area . . . (Liff Schleeselman, now directing sales premotion and research . . . Donald Ryer transferred to Newark as station manager . . . Roger Haley now operating as station and terminal manager in Boston . . Vincent Cramer managing the station at Chicago . . and Frank Ogden doing the same at Indianapolis . . . (Concluded on Page 18)

(Concluded on Page 18)





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NEW EQUIPMENT

TOWMOTOR CORPORATION reports that its new and improved Model W electric pallet truck is the result of "exhaustive tests under all kinds of operating conditions." Built to handle pallet loads weighing up to 4,000 pounds, it is easily maneuverable and features a new contractor panel, a "positive-action brake with fool-proof deed-man control," better differential action, and all-rubber, dual trailer wheels. Heavy loads are raised rapidly. According to Towmotor, the Model W has been "job-proven in many industries, including automotive, bottling, canning, chemicals, chewing gum, drugs, food products, furniture, metal working, paint, and petroleum."

Inter-office communication is a must in

Inter-office communication is a must in shipping circles. The ability to disassemble the new Executone intercom Master sta-



tion, replace the amplifier or selector switches, and then re-assemble the entire unit in only six minutes, is particularly interesting to shippers and carriers—espe-cially when the intercom user saves con-siderable time and money when he wants to expand or service his system. This has

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heen made possible, it is reported, through the use of "anit construction" in the Master station. No more than aix acrews need be removed to replace either the amplifier or selector. Since the amplifier plugs into the chassis, no soldering of connections is

chassis, no soldering of connections in necessary.

A user who chooses to start with an inexpensive two station system can now expand it economically at a later time by simply removing the selector switch and replacing it with a seven- or II-station Expansion Kit. Similarly, a seven-connection Master can be expanded to accommodate II other stations. Since the original amplifier and housing are retained in expanding the Master to give greater callorigination capacity, the investment in the original equipment is protected. Also, the ability to quickly replace either amplifier or selector switches means that the local

distributor or the user's maintenance department can service the equipment in less time. Some users and all distributors keep extra amplifiers on hand and simply replace when necessary. Original amplifier can then be serviced by Excustone without interrupting the use of the system.

Mobilift Corporation is producing its Tier-Master fork lift trick with telescoping uprights low enough to enter a motor truck van body, 'yet with a lift that will tier merchandise and materials three pallets high." This is especially valuable in the loading of trucks picking up airport-bound freight and merchandise off-loaded by arriving planes. The new model is 72 inches high with mast lowered, but will elevate to 117 inches. Overall height with the mast extended is 142 inches. Speed of lift is at the rate of 45 feet per minute. Visibility is excellent. Capacity is 2,000 pounds.

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- 6 Sample back number of the American Import & Export Bulletin, giving news of developments in the foreign trade industry. Covers Customs, Commerce, Agriculture, Treasury, and State Departments thoroughly. Reports on changes in laws, rules, regulations, etc.
- An illustrated description of the Loadair mechanical parking system. Only men in the aviation industry, or allied fields, may apply for this book.
- A handsome, eight-inch, plastic rule, also showing the metric scale on the reverse side. This is offered by a well-known freight forwarding firm. If you want more than one, please specify on coupon.
- 9 File-sized booklet designed and written for the purpose of taking the guesswork out of selecting and using corrugated and solid-fibre shipping cases. Includes the advantages, applications, composition, forms, properties, and scaling techniques of case scaling adhesives for hand or machine scaling operations. Illustrated.
- 10 A comprehensive 10-page book in color which shows every detail of a recently designed electric pallet truck.

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- American Foreign Trade Definitions, a 32-page book of high value to shippers everywhere. Includes a chart showing the various steps taken from the time a shipment leaves the consignor to the moment it reaches the consignor. Produced and offered by one of the larger freight forwarding companies.
- 1.2 A complete, 40-page list of independent foreign freight forwarders registered with the Federal Maritime Board under General Order No. 72. The only one of its kind published.
- 13 Extra Arms and Hands for Towmotors One-Man Gang—a new folder issued by the manufacturer, illutrating a large variety of accessories designed for rapid mass handling of unusual materials and aspecial types of loads.
- An attractive folder describing the operations of one of the outstanding domestic air freight forwarding outlits.
- 15 Six-page, two-color brochure prepared by Mobilift Carporation, illustrating its two new 2,000-pound capacity Lev-R-Matic Drive Fork Lift Trucks.
- 16 A domestic and international air freight forwarder offers a booklet showing nine ways on how to show a profit on your shipping.
- 17 Complete information on the Grip-A-Tab line of automatic disponers of sealing tape. Will handle tapes as narrow as a quarter-lach and as wide as eight inches. Can take care of all heavyduty tapes.
- An attractive and valuable wall chart in color, showing the proper procedures in storing gummed tape, the use of automatic dispensers, and the application of gummed tape. Should be on the walls of all shipping departments. Illustrations tell the story in a glance.
- 10 That Every Shipper Should Know, a 24-page, fully illustrated manual devoted to proper packaging with sealing tape. Includes directions for sealing various types of package—telescope cartons, soft-wraps, irregular shapes, etc. Also contains essential excepts of regulations covering parcel post, railway express, air express, and motor carrier.
- A complete directory of all Railway Express Agency offices which provide air express service. Offices are listed alphabetically to facilitate detection. Should be on the desk of every traffic man and shipper.
- 21 The Blue Book of Packaging—a 24-page, fully-illustrated hooklet showing the various methods of securing shipments with steel strapping. Covers every conceivable type of container. Includes a strapping schedule indicating savings effected through the use of such strapping.
- Handbook of Material Handling with Industrial Trucks—71 pages of information of particular significance to volume shippers. Illustrated with photographs and charts. Composed of four sections including (1) Evaluation of Industrial Truck Handling. (2) Material Handling Management, (3) Organizing and Industrial Truck System, and (4) Practical Truck Engineering.

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23 Float Packaging—a 12-page, threecolor, illustrated booklet on
Kimpak creped wadding, a versatile interior packaging material. Demonstrates
its various uses: blocking and bracing;
flotation; absorbent packing; surface pre-

A Certified Job Study prepared for the warehousing industry. Analysis shows how \$3,000 a year is saved on one item alone, with mass handling. Man-hour costs cut 50 to 75 percent and ser-age space increased up to 300 percent. 24

Traffic men and other executives always are interested in the efficient maintenance of business records and effective control over all phases of the department. Here's an 80-page illustrated book in color, Kardes Visible Record Control. Describes verious combinations of record forms which may be incorporated in Kardex pockets and the great variety of colored signal control methods used on the visible margin of the records.

26 Accessory Data Sheet on fork ex-tensions for handling loads longer than those ordinarily carried on the regular forks of a lift track.

A Certified Job Study showing how a certain line was able to reduce terminal storage and eave time in loading and unloading materials. In one of the illustrated cases, a job which formerly required 72 man-hours was cut to 12; in another, an eight-man-hour operation was reduced to a mere 20 minutes.

28 Your Fereign Shipping Handbook, a descriptive booklet, in coler, issued by the Foreign Traffic Department of American Express. Introduces in graphic form the various services of the company's international shipping setup.

29 TWA's new air freight folder, which explains why shipping-by-air aids business. Gives examples of some low rates for certain commodities. Includes a map of TWA's coast-to-coast service and connecting routes.

Attractive illustrated eight-page brockure which shows how handling time can be cut 85%. Excellent for executives whose firms aftern warehouses or who are located at terminals airporta, etc.

21 Complete details on a speedy method for tagging boxes for storage or shipment by means of an automatic one-hand tacker for driving staples and fastening tags to various types of containers. Easily assembled and disassembled. Also a new-type kit for holding 1,000 staples and which fits into a vest pocket.

32 Twenty-eight-page booklet, in color, which describes the functions of overhead trolley conveyors. Profusely illas-

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trated. Visual lesson on the valuable work of overhead conveyors.

22 Ready reference catalog of the Mercury line of materials handling equipment. Includes tracters, trailers, and lift trucks. Well illustrated and in color.

34 A study of a certain area which proved that the intelligent use of containers can get the shipper more miles per shipping dellar. Interesting reading.

35 A certificated international air freight forwarder is offering an attractive folder which describes its own consolidation and forwarding set-up.

36 Latest issue of a valuable magazine which includes many useful tips on the use of steel strapping in packaging shipments. Well illustrated.

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BOOKS

THE Psychology of Flight, by Alex Varney I. (D. Van Nostrand Company, 250 4th Avenue, New York; 250 pagen; \$3.75], centains a wealth of practical information and advise that condition human response" to fight. This books a must. . . John J. Fisherty's Aristics From the Ground Up (J. B. Lippincott Campany, East Weshington Equare, Philadelphia; 187 pages; \$2.75] has produced a readable book on aviation as it is today. The subject is consistenced, but the general picture does not of the development of the service and maintenance organizations which were the backbone of the Army Air Forces during World War II" can be found in John M. Coleman's The Development of the service and maintenance organizations which were the backbone of the Army Air Forces during World War II" can be found in John M. Coleman's The Development of Tartiesd Berviess in the Army Air Forces (Columbia University Press, Morningale Heights, New York; 250 pages; \$4.60). Intracting the Coleman's The Development of University Press, Morningale Heights, New York; 250 pages; \$4.60). Latrence A. Hawkins' Adventure into the University Press, Morningal Publishers, 120 North 7th Street, St. Louis, Missourt; 551 pages).

Latrence A. Hawkins' Adventure into the Uniknown (William Morrow and Company, Inc., 100). Late of the General Electric Research Laboratory, We recommend this. . . Atomic Energy and the Street, 252 pages; \$2.85); the proposal of a world airlift company, 152 East \$246 Street, New York; 216 pages; \$2.85); the proposal of a world airlift composed of all the war air powers of all airminded nations as a permanent security force, Gill Robb Wilson writes the proposal of a world airlift composed of all the war air powers of all airminded nations as a permanent security force, Gill Robb Wilson writes the proposal of a world airlift composed of all the war air powers of all airminded nations as a permanent security force, Gill Robb Wilson writes the profess.

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Air Cargo Skyrockets

(Consinued from Page 11)

miles in transpacific operations for the military. The all-freight carrier, which had started the year with five DC-4s, ended it with eight Executive Vice President-General Manager Arthur V. Norden pointed out that for the first time in S&W's 44 months of operation, the final quarter of last year found westbound imports exceeding east-bound exports for three consecutive months. For the entire year, the line's westbound

traffic proved to be 32 percent higher than that of 1949 and 30 percent above the 1948 figure. All this bears out a prediction made by Norden two years ago that postwar re-covery in Europe would tend to correct the transatlantic imbalance caused by her in-ability to produce in prewar quantities.

Congratulations

(Continued from Page 14)

Hal Blasuw serving as district sales manager in the latter city.

TWA: John F. Forsyth elevated to the post of manager of general sales development... Albert J. Pereira appointed district sales manager for the Miami and Havans areas... Basil Davis named district operations manager at London... William C. Love has taken over the job of district sales manager at Frankfurt... W. E. Broughton promoted to assistant director of public relations... Walter Menke named administrative assistant to the director of public relations... Emmet Riordan appointed Los Angeles public relations manager; Kenneth Fletcher, New York public relations manager; James Nolan, European public relations for the district descriptions of the district descriptions and the descriptions of the

and Earle Luby, manager of production and research.
United Air Lines: Jack Steinbrenner named district cargo representative at Los Angeles.
Western Air Lines: Robert E. McKenna and Edward P. Whitney, at Denwer, in respective posts of regional sales manager and regional interline and agency manager . . . George G. Cain in new job as district manager in charge of sales and service for the Long Beach area.

AIR FRANCE "FAST-AIRE" CARGO SERVICE MADE THIS FABULOUS NEWS FOR BLOOMINGDALE'S



The next day these berries, gaurmet's delicacy, were an sale in Bloomingdale's, New York. One of the many profitable air freight jobs Air France does every day.

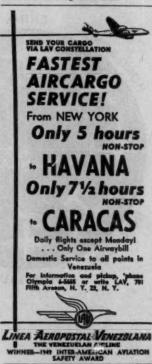
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*You rouch these morkets of the right time to take advantage of peak demand. **SHIPMENTS reuted beyond Peris get priority handling. **New law commedities. Out inventory, storage, insurance costs... save time... with "FAST-AIRS" CAROS SERVICE.

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PAGE 18—AIR TRANSPORTATION—Air Commerce

GUEST EDITORIAL

(Continued from Page 5)

smaller items of structural steel and tools and hardware are not uncommon as cargo, and every kind of household appliances travels by air, from eggbeaters to gas ranges and water heaters.

During the interruption of river traffic due to floods last year, the first large-scale transportation of coffee by air was undertaken. Samples and small shipments have been common for years, but last year marked the first time that coffee moved in quantity on airplanes, and the air shipments made it possible for Colombian coffee-growers to take advantage of the high selling prices of coffee during the past season.

Hatching eggs, livestock, pharmaceuticals, photographic supplies, machine parts, X-ray equipment and tubes, automobile tires, nylons, dresses and euits—practically any necessity or luxury you can mention moves by air in Colombia. Companies doing business in several cities find their branch offices only a few hours away by air. Avianca moves 20 tons of newspapers daily by air, so almost no Colombian has an excuse to be uninformed!

Representing only a small part of the country's commerce, but an interesting * sidelight on what aviation does in Colombia, is the Aerotaxi service. In the great llanos or plains of Colombia, stores and shopping centers are few and far between. Heart of the country's cattle industry, its population must depend on aviation for contact with the outside world. Aerotaxi is a sort of flying shopping service operated by Avianca, through which the residents of this area may go to the nearest airport, place an order for some desired article, and have the article purchased in the nearest big city, and flown back to the airport where the order was initiated, for the cost of the article and transportation. The service is deservedly popular, and has bought and delivered eveything from sewing needles to refrigerators!

In Colombia, air transportation is as nearly indispensable to commerce as it is anywhere else in the world—and even so, it is still in its infancy. With time will come the installation of improved ground control apparatus, lighting for night operations, better equipment and faster loading methods, all fostering growth and additional usage—and all made necessary by what started as a drawback—our three parallel cordilleras!

THE BALTIC LAST YEAR

(Continued from Page 4) .

this country, and charterers are thus able to take advantage of very attractive rates. The corporations have made use of the larger charter aircraft during the latter part of the year to augment their freight services to Singapore and Hong Kong, and to enable them to fulfill Government commitments. Added to this, the rush of Christmas traffic has led to an acute shortage of four-engined freight aircraft.

The Bristol Freighters which inaugurated the cross-Channel car ferry in 1949 have again a very busy Summer, and four aircraft have been kept fully

A significant development of the past year has been the increasing proportion of flights where revenue loads are carried in both directions, which benefits operator, charterer and broker alike.

All in all it would appear that the zir freight market may look forward with confidence to a busy new year, and charter companies should be assured of high utilization and continuous employment.

AIR CARGO'S GAIN

(Continued from Page 8)

our air cargo planes. However, in air freight we have the additional obstacle of a little thing called a wing. This wing has the inconvenient habit of continually getting in the way and making it extremely difficult to spot an airplane immediately adjacent to the terminal. Hence, the reason for the development and creation of the Aerobridge, which gives us a movable dock out to the airplane.

Use of an overhead trolley conveyor system as the prime mover for bar handle trucks with telescoping mast and conveyor hook can provide an economic means for distributing and handling air cargo. There are some typical overhead trolley conveyor systems, which have been installed by the Link-Belt Comany. However, as with any material handling system, the overhead conveyor or dragline requires careful evaluation. For each particular installation, consideration must be given to such points as:

1. Number of airplane ramp posi-

- 2. Length of terminal dock.
- 3. Width of terminal dock.
- 4. Pounds of air freight handled across dock.
- Number of airline operators using facilities.

6. Types of air freight.

There should be at least three or more airfreighter ramp or loading positions immediately adjacent to the freight terminal building before the use of the dragline conveyor appears justified. With only one or two, and

even in some cases three, loading positions, the distance that air freight must be handled between the cartage trucks and the akyfreighter is sufficiently short that hand pushing of carts is the most efficient procedure.

Due to the length of cargo airplanes the space required for each when spotted next to the dock is equivalent to three freight car positions or at least 12 motor truck positions, assuming the trucks are spotted at right angles to the dock. From the foregoing illustration, it is apparent that benefits derived in using an overhead conveyor are reached far sooner in air freight terminal installations.

As materials-handling patterns for air freight are only now being formulated, it is not advisable at this time to consider floor type tow conveyor systems. This type of installation must be submerged permanently in the floor. While it possesses certain advantages not obtainable with an overhead dragline conveyor, its major obstacle is that once installed, its circuit pattern is fixed. Whereas the overhead system circuit pattern lends itself to fairly rapid modification with a minimum of expense and labor.

Loading of air freight can be conducted using any one of several methods of materials handling. The air freight can be handled from the end gate of the drayage truck, across the freight dock, and into the air freighter by:

- 1. A combination pallet and fork lift truck operation.
- 2. A complete roller, skate, or powered belt conveyor operation
- Skate or roller conveyors used in conjunction with pallets and fork lift trucks.
- 4. Trackless train and trailers in conjunction with a powered booster belt conveyor unit.
- 5. Trackless train and trailers in conjunction with a fork lift truck.
 - 6. Hand push carts and Aerobridge.
- Bar handle trucks with telescoping mast and conveyor hook in conjunction with overhead trolley conveyor system and Aerobridge.
- 8. Skate or roller conveyors in conjunction with the Aerobridge.
- Overhead trolley conveyor system and trucks in conjunction with a powered belt conveyor.
- 10. Other workable combinations of the above.

A large segment of the requirements of the air freight industry in air terminal operation is best served by a standard terminal cart, which can be quickly adapted for a variety of basic jobs. A convertible or triple purpose air terminal cart has been designed by Airquipment which provides for this needed standardization and versatility.

The lightweight construction of the Aerocart makes it readily adaptable for hand push operation. The addition of quickly removable hitches converts it for tractor-train use. Attachment of a retractable mast converts the Aerocart for its third role, for use with overhead trolley conveyors. The mast has been so designed that in its retracted position it offers adequate clearance for rolling through the main cargo door of presently used air-freighters.

Optional equipment such as a rain cover, small package enclosure, and lattice type, push rails are available with the Aerocart.

There is no intention to belittle the fork lift truck, for it is a very neceisary piece of equipment. At least one or more fork lift trucks are required on any air freight dock to perform the jobs they are suited to handle. The fork lift is, and apparently always will be, the work horse around any air freight operation. There is no better piece of equipment for the handling of heavy and large, bulky shipments.

There remains wide divergence of opinion in how air freight should be handled. The more progressive and large volume air freight operators are beginning to see the economies and advantages of utilizing hand carts with or without a dragline conveyor system in conjunction with the Aerobridge. This permits a minimum of physical handling of air freight. It is placed directly on the hand truck, which is actually a pallet on wheels. The air freight may be hand pushed, powered or tow-mast towed, or shoved, but not handled again till the cart is inside the airplane. There may be some occasions where a few pallets are used so as not to tie up the hand trucks for prolonged periods of time.

Some operators plan to use a roller or skate conveyor for offloading freight from the pick-up truck to the point it is transferred to the hand truck. This interposes an extra operation as well as extra equipment in the material handling procedure. Frankly this is believed not necessary and it is strongly advised that careful consideration be given to the elimination of skate or roller conveyors in this instance.

A roller or endless belt type conveyor system for the handling of air freight through a terminal is still considered preferable by some groups. A previous study has shown that this is a "closed loading system." It is difficult to introduce late shipments into

the so-called pipe line once the system is filled. It also lacks versatility and ease for sorting of cargo provided by use of an overhead dragline conveyor. This latter system may be considered an "open loading system," for this pipe line of cargo material flow is open to receiving freight at any point. It is also extremely adaptable for sorting and distributing cargo with the minimum of handling.

There are other operators who are still convinced they would prefer their operation on the ground level and load by the "roller coaster" method not in a straight line but up and down by fork lift trucks and pallets. Loading an entire airplane from the ground level with fork lift trucks and pallets is costly and out-of-date. It is felt that a true evaluation of this procedure will prove this point.

The importance of carefully evaluating the need for a separate air freight terminal at an airport before providing these facilities can not be emphasized too strongly. Obviously, such facilities are not recommended unless, after careful analyses, it is found that separate air freight facilities will provide a reduction over-present methods in cargo handling costs.

Unfortunately, in some instances, plans for air freight terminals are progressing that will result in increased cargo handling and loading costs to the air line operators. This is due in part to the high ratio of passenger to all-cargo aircraft serving these particular points. Where a majority of air freight is carried on passenger flights, it is not practical to receive all air freight at a separate air freight terminal located some distance away and then have to transport it by tractor-train to the passenger flight line.

There is still much to be done before the problems of air freight handling are solved. It is recommended that any future studies be undertaken as a coordinated project on a national level.

MORE ON AIR BEEF

(Continued from Page 6)

ld for each pound of meat delivered to cool stores at Wyndham, because the experiment could have "a significant bearing on the future cattle industry of Northern Australia."

The 1950 target was set at 4,500-5,000 beasts and, to handle this greatly increased number, slaughter house capacity, chilling space, and staff accommodation were expanded, new lighting and power plant was installed, and many

chinery, including electrically-operated hoisting gear, was set up to handle some jobs previously performed manually.

The killing season began early in May. At first the abbatoirs handled about 100 beasts a week, but before the end of the season they had reached their capacity of 300 cattle per week.

The cattle were drawn from an area within roughly a 90-mile radius of Glenroy, including six cattle stations besides Glenroy itself. The first mob of 250 head came from rough, inaccessible mountain country adjoining the southern boundary of Glenroy. Only some 25 miles from the abbatoir, it had not been mustered for five or six years.

"From the average age of the cattle," says Mr. Grabowsky, who spent the 1950 season at Glenroy, "I would have put it at nine or ten years. Some were 13 to 15 years old; many fell dead before the knacker's hammer killed them. They were just able to reach the knacking pen—not half of them would have stood up to the arduous stock route to Wyndham. Remember that although Wyndham is only 180 air miles from Glenroy, overland it is 300 miles through rough country."

Bad as they were, however, those cattle brought a net return of some £6 per head, 62% being classed as export quality, while 36% were sold for small goods meat.

This first batch proved one of the most important claims of the Air Beef organizers: that the scheme would enable farmers to clean their property of useless, aged stock. Previously, these beasts were allowed to graze till sickness or old age ended their useless roaming. Now every one had a nominal price of £5 on its head, and the cattlemen could dispose of their aged stock at a profit.

The second mob of some 240 cattle was mustered within 10 miles of the abbatoirs. They were "soft" cattle, unfit to make the overland journey to Wyndham. If they had gone, the estimated return would have been 10% as "freezers" (i.e. carcass export quality, with bone in). By killing them at Glenroy, Air Beef obtained these figures: 79.3% export freezers; 21% saleable for smallgoods; average hot weight, 592 pounds; average net return £8. 15. 0d a head.

The procedure at Glenroy was for stockmen to bring in a herd of cattle and hold it at some distance from the abbatoirs. Each day, some 45-50 cattle were cut out ond brought to the pens. After slaughtering, the carcases were quartered and graded by a Commonwealth meat inspector. Each quarter

was individually graded, so that the fore quarter of one carcass might be graded as Air Beef first quality. The hind quarter of the same side, bruised perhaps by the horns of other cattle, might be Dakota third grade, the second fore Glenroy second quality, and the second hind piece-meat. The carcasses were then chilled to the requisite temperature for transport.

What the Air Beef organizers had first to prove was that once beef had been chilled to the correct temperature, it could be transported in an unrefrigerated aircraft to a coastal cold storage center without deterioration in appearance or quality. Practical operation proved this contention beyond all shadow of doubt; in fact, on many occasions Glenroy beef was up-graded by the second Commonwealth meat inspector who checked all the meat on arrival at Wyndham.

In the Glenroy cold store, the carcasses were loaded on to a monorail conveyor, which raised them to a convenient height for loading into the Freighter. The quarters were then slid easily along the rail by hand and stowed on the floor of the aircraft. At Wyndham, the Freighter was met by specially insulated vans, which backed up to the nose of the aircraft and took the meat to cold storage at the meatworks, where it awaited transport over-

The abbatoirs worked a five-day week, the Freighter making two flights a day to Wyndham, carrying some six tons of beef on the outward trips and returning with a back-load of operating supplies, equipment and mail. An additional trip was made to Wyndham on Saturday mornings, and once a week a cargo of hides was flown to Derby for shipment to Fremantle. In all, the aircraft carried 2,062,304 pounds of beef and 155,420 pounds of hides and flew 82.412 miles in 588 flying hours.

The 1950 season at Glenroy ended early because of a shortage of horses and stockmen, but expert opinion holds that the Glenroy abbatoirs could extend their season to 33 weeks, compared with 21 weeks at the Wyndham meat works. In 1950, the Wyndham season threatened to be even shorter, for dry weather made the stock routes almost unusable.

The total freight carried by the Bristol aircraft during the five months was 2,877,285 pounds. This consisted in part of operating supplies, mail, food, equipment and such items as a 6,615-pound tractor, but among other loads carried were sheep, pigs, goats, and stud bulls.

Proof of the Pudding

The proof of the pudding's in the eating—and the success of the Air Beef operation follows the same line of reasoning. According to I. H. Grabowsky, development and planning manager of Australian National Airways, a new Air Beef abbatoir will be operating in the Kimberley Division of Western Australian next year. According to Aircraft, an Australian journal, Grabowsky stated:

"In 1951, we shall be flying up materials and workmen to construct the abbatoirs and other buildings at Hall's Creek, in the same way as we did at Glenroy in 1948-49.

"What will happen after that, we cannot say yet. The Kimberleys could actually feed cattle into a dozen or more of these centers, but while one Bristol Freighter can handle the two centers at Glenroy and Hall's Cresk in 1952. Three or four would be needed if the scheme is developed to cover the entire Kimberley region."

Pig-raising began at Glenroy as a sideshoot of the Air Beef scheme. One of the main criticisms of the scheme in its early days was that there was too much wastage of valuable by-products. Certain edible items of offal could be flown out, but there was a residue of offal which it was not profitable to fly out and which had to be utilized on the spot or wasted. In 1949, the Air Beef organizers concentrated exclusively on getting the air lift working smoothly. In 1950. with

precision, an early opportunity was the Freighter operating with clockwork taken to fly in 70 pigs for fattening and, later, two boars and about 100 sows for breeding purposes. A small killing was made at the end of the season, and 5,439 pounds of pork were flown out. Beginning simply as a means of eliminating beef wastage, pigraising promises to play an important part in the Glenroy program. One farmer in the area intends to deliver 1,000 pigs to the abbatoirs during 1951 in addition to 2,000 cattle, and many other pastoralists have shown interest.

Most notable example of livestock transport, however, was a cargo of 20 stud bulls flown by the Air Beef Freighter from Fossil Downs to Glenroy. The bulls had been bought by the Mount House Pastoral Company from the Kimberley Poll Shorthorn Stud, and the whole operation of loading, transport to Glenroy (over 100 miles away), and unloading took less than two hours, compared with the overland delivery time of three weeks. As the Freighter had previously flown a load of hides to Derby and brought five tons of fuel to Fossil Downs, the cost of transporting the cattle, flown as a backload, was only 30/-a head.

W. N. M. MacDonald, of the Kimberley Poll Shorthorn Stud, said later that the flight heralded a new era of stud cattle transportation in the north of Australia and should greatly facilitate herd improvement. Increasing use has been made of the Freighter to backload livestock into the Kimberleys, the total weight of the stud bulls carried to Glenroy during the season being 11.163 pounds.

Air Beef has come in for a good deal of criticism. Most of it has been based either on an unreasoning prejudice against air transport or on accusations of wastage of valuable by-products. Both criticisms were effectively answered in 1950.

There is little doubt that Air Beef has come to stay in Northern Australia.

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It has not only improved the quality and quantity of beef produced by existing properties, but it has shown that there is ample scope for new settlers. The area of the Kimberleys is vast and very sparsely populated.

"If we don't populate the area," says

Mr. Grabowsky, "some one else will."
The only way is to attract small settlers, and it is these men who show the greatest enthusiasm for the Air Beef plan. In Europe, there are 6,340 people to the square mile; in Northern Australia there is only one white man to every 100 square miles.

The needs of the export market and of Australia's own growing home market insure a constant sale for all the meat that Northern Australia can produce. An extensive survey has already been made for potential expansion of Air Beef's sphere of operations. Plans for a new abbatoir at Hall's Creek are under consideration and, if the idea is adopted, it is planned to ship prefabricated units north in time for the Freighter to carry them as back-loads during the 1951 Glenroy season. It is hoped that the abbatoir will be operating for the 1952 season.

Air transport can bring Northern Australia inestimable benefits. Aircraft are at present the only possible means of swift and regular transport in the north, and expansion of the Air Beef scheme with Government assistance and encouragement would ultimately enable Northern Australia to rival the Argentine as a meat-producing area.

U. S. OVERSEAS AIR CARGO

(Continued from Page 10)

ordinarily they would have to be carried in all-cargo service. Examples of such shipments via Seaboard and Western are an automobile; a 9,200-pound piece of dredging equipment; an 8,736-pound shipment of machine parts; and 9,000 pounds of steamship boiler tubes. According to data filed with CAB in Docket No. 3041, Seaboard and Western Airlines, Inc., covering the month of March, 1949, Seaboard and Western's shipments between North America and Europe included 57 which weighed more than 500 pounds each. Of that number, 30 weighed more than 1,000 pounds and seven more than 5,000 pounds. By way of comparison, those shipments weighing in excess of 500

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pounds which were carried by Pan American Airways between the same areas in March, 1949, totaled but 22, of which 13 weighed in excess of 1,000 pounds and only one in excess of 5.000 pounds. .

Seaboard and Western maintains an Analysis Section which studies highrated shipments moving by steamship and estimates what products could be handled advantageously by air. Salesmen then solicit manufacturers of such products and offer to make a survey of their foreign business. A report is prepared, showing the savings in time, handling charges, insurance premiums, etc., which would be effected by bulk air transportation. The total number of customer accounts is relatively small. For import tonnage, the carrier has established agencies in certain "stable currency" countries. Under normal conditions, it does not accept cargo which it cannot move out within 48 hours, nor does it accept shipments which it cannot deliver in its own planes, i.e., off-line traffic. Since the carrier also picks up

DOMESTIC AIR PARCEL POST RATES

Zone			8 6	ound over ounces Cents	pe	iitiona unds Cents
, 2, and 3				60 65 70 75 75 80		48 50 56 64 72 80
Weight	Zones 1, 2 & 3	Zone 4	Zone 5	Zone	Zone 7	Zone 8
Over S ounces to-						
1 pounds 2 pounds 3 pounds 4 pounds 5 pounds 5 pounds 6 pounds 6 pounds 10 pounds 11 pounds 12 pounds 13 pounds 14 pounds 15 pounds 16 pounds 17 pounds 18 pounds 19 pounds 19 pounds 19 pounds 19 pounds 10 pounds 10 pounds 11 pounds 11 pounds 12 pounds 12 pounds 13 pounds 14 pounds 15 pounds 16 pounds 17 pounds 18 pounds 19 pounds 19 pounds 19 pounds 10 pounds 10 pounds 11 pounds 11 pounds 12 pounds 12 pounds 13 pounds 14 pounds 15 pounds 16 pounds 17 pounds 18 pounds 18 pounds 19 pounds 19 pounds 10 pounds 10 pounds 10 pounds 11 pounds 12 pounds 13 pounds 14 pounds 15 pounds 16 pounds 17 pounds 18 pounds 18 pounds 19 pounds 10 p	1.08 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.04	\$0.65 1.65 2	\$0,70	\$0.75 1.32 2.03 1.32 3.32 4.03 4.03 4.03 4.03 1.3.55 9.071 1.0.99 1.12.27 1.0.99 1.12.27 1.0.99 1.12.27 1.0.99 1.12.27 1.0.99 1.12.27 1.0.99 1.12.27 1.0.99 1.12.27 1.0.99 1.12.27 1.0.99	\$0.76 1.49 1.4.19 1.4.29 1.4.38 1.4.38 1.6.3	\$0.5(2.4) 1.66-1.66 2.44 2.44 2.44 2.44 2.44 2.44 2.44 2

TABLE 34.—Selected Statistics of Specified Large Irregular Air Carriers, Third Quarter, 1948

Carrier	Operating base	Type of serv- ice (1)	of	Aircraft owned or rented, (3) end of quarter		Total number of person- nel, end of	Total amets, end of quarter	Total revenue
				No.	Туре	period		
Aerovias Sud Ameri-	St. Petersburg,Fla.	C	0	1	C-46	34	\$ 40,955	\$ 76,383
Air Transport Amo-	Scattle, Wash	C	0	2	C-46	12	37,838	18,873
Arctic-Pacific, Inc Argonaut Airways Corp.	Seattle, Wash Miami, Fla	PC	0	2 2	DC-3 DC-3	22	60,813	119,132
Arnold Air Service, Inc.				1	Sealine		53,756	56,068
Caribbean American Lines, Inc.	Miami, Fla		DO	1	C-16	15	61,697	16,978
Columbia Air Cargo, Inc.	Portland, Ore Miami, Fla	****	DO					
Conner Air Lines Continental Charters, Inc.	Miami, Fla Miami, Fla	PC	DO DO	ï	DC-3	16	58,208	28,271
General Air Cargo, Inc. Golden North Airways,	Portland, Ore Fairbanks, Alaska		DO			19	38,956	********
Inc. Inter-American Air- ways, Inc.	Miami Springs,	PC	DO					
International Air	Palm Beach; Fla	PC	DO					*******
Freight, Inc. Miami Airline, Inc	Miami, Fla	PC	DO	3	DC-3 C-46		24,092	192,297
Mount McKinley Air-	Anchorage, Alaska	PC			DC-3	18	152,798	125,642
ways, Inc. Nationwide Air Trans- port Service, Inc.	Miami, Fla			8 3 2	C-47 C-46 Beech			
New England Air Ex-	Port Chester, N.Y.	PC	DO	1 2	L-12-a . DC-3	12		********
Pacific Alaska Air Ex- press, Inc.	Seattle, Wash	PC	0	2	DC-3	. 8		
Pearnon-Alaska, Inc.	Anchorage, Alaska	PC	0					
Saldana, Eduardo E	Son Juan, P.R	PC	DO					
Scott AeroServices, Inc.			DO		P.O. A.		DC0 000	
Seaboard & Western Airlines, Inc.	New York, N.Y	PC	DO	5	DC-4	1	869,239	927,332
Skytrain Airways, Inc.	New Orleans, La., Miami, Fla		DO	5	C-46		112,027	89,253
Tranding & Trans- port Co.	iverania, red	10	100	1	Sikorsky		*******	
Sourdough Air Trans- port,	Fairbanks, Alaska		DO	1	DC-3	1		41,572
Southern Air Express	Clearwater, Fla	C	0	1	DC-3		31,185	42,283
Standard Air Cargo Totem Air Service, Inc.	Seattle, Wash	PC PC	DO	2 1	DC-3 DC-3 18-56	14		46,747 61,344
Trans-Alaskan Air- ways, Inc.	Anchorage, Alaska	PC	0	1	28-5ACI			
Trans Caribbean Air Cargo Lines, Inc.	New York, N.Y			2	DC-4			
Transocean Air Lines	Oakland, Calif	PC	DO	13	DC-4	836	3,377,068	1,904,261

1 C indicates only cargo was carried; PC, both passengers and cargo.

O (overseas) indirates services were to and from continental United States only; DO indicates that in addition to overseas services, domestic (D) services were rendered within continental United States. Type of equipment is littled as reported by the carriers.

Data cover the quarter ended Aug. 31, 1948.

Source: Compiled from flight reports and statistical reports filed with CAB by the carriers.

most of its cargoes near point of origin, little business with connecting carriers is handled.

A survey of shipments during one month indicated that 40 percent consisted of apparel; 18 percent of machinery and machine tools; 15 percent of livestock; nine percent of spare parts for aircraft and autos; eight percent of watches and accessories; six percent of pharmaceuticals and chemicals; and four percent of textiles. In most cases, these commodities have moved on specific commodity rates which are lower than the rate on general commodities. More comprehensive data on the composition of traffic moved by Seaboard and Western are available in exhibits filed by the carrier in Docket No. 3041. referred to above.

To illustrate types of commodities moved by a different irregular carrier operating in a different geographical area, there is shown in table 36 (published next month) the shipments listed on the cargo manifest filed with CAB by a large noncertificated irregular air carrier covering a flight to South America which left Teterboro, N. J., on July 8, 1948, and returned to Miami on July 30.

The above flight also carried three non-revenue passengers—two foreign agents for the carrier, and an attendant for the cattle. Average weight of the 19 shipments was 578.4 pounds, though 17 shipments weighed less than 100 pounds each.

Air freight tariff rules and regulations governing shipments via certificated and noncertificated carriers are similar in many respects, but some differences exist. Many of the conditions under which certain types of commodities will be accepted for transportation are alike, as well as commodities which will not be accepted by the carriers. Both types of carriers base rates on weight, measurement, value and distance of shipment. In the case of Seaboard and Western, one pound is considered equal to 300 cubic inches in determining weight charges, as compared to 200 cubic inches for Pan American. Shipments valued at more than \$50,000 (as compared with \$100,000 for Pan American) will not be accepted by Seaboard and Western unless special arrangements have been made in advance. The latter's tariff states that rates are to be collected in United States currency. This is in contrast to the practice of some scheduled carriers, both United States and foreign, which may accept payment in foreign currencies.

Customs formalities must be complied with by the consignor and consignee. Seaboard and Western is entitled though not obligated to perform such service and to advance taxes, charges, etc., on behalf of the consignor or consignee. In such cases the carrier assumes the character of an agent. The carrier, of course, may entrust the completion of customs formalities to an



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VI-OUTLOOK FOR DEVELOPMENT OF SERVICES

(A) Competitive Position of Air Cargo

United States overseas air cargo services have created, and will no doubt continue to create, a certain amount of new traffic-i.e., traffic which would not have moved at all in the absence of air transport. This type of traffic may be exemplified by daily newspapers flown to Europe from New York, which in many cases would not have moved by steamship because of the longer time in transit. The largest part of the United States air cargo potential may lie, however, in divertible traffic which would otherwise move in ocean transport. It is pertinent, therefore, to consider briefly some of the more significant aspects of the overseas cargo trans-

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port market, with special reference to the competitive status of airlines in terms of potential traffic and rate levels. The potential benefits available to overseas air cargo shippers, which may be unavailable from competing transportation, are discussed in a later section.

Table 5 (July, 1950, issue) summarized the value and shipping weight of total United States exports of domestic and foreign merchandise and general imports, and the corresponding figures for trade by air. Ratios derived from those data indicate that air imports, and to a less marked degree, air exports, consist of commodities of extremely high value. In 1946, air imports, on the average, were valued at \$7.91 per pound, and air exports at \$5.09 per pound, compared with \$0.04 per pound for both total United States exports of domestic and foreign merchandise and total United States general imports.

Information concerning the composition of United States foreign trade during the year 1948 helps to explain the relatively low value per pound of exports and imports as a whole. Four broad economic classes of goods com-

prised the following percentages of total value of exports and imports:

	Exports of U.S. mer- chandise	
Crude materials		29.9
Foodstuffs	. 20.7	28.5
Semimanufactures	. 10.9	23.2
Finished manufacture	s 56.5	18.4
	100.0	100.0

A large part of the total volume of United States trade consists of commodities of relatively low value per pound and little shipping urgency which move in bulk lots. Thus practically all of the crude materials and a large part of the traffic in foodstuffs and semimanufactures can be eliminated from consideration as potential air cargo. Such foodstuffs as fruits and vegetables and dairy products may be air cargo candidates in many instances; and cut but unset diamonds have already moved by air to an appreciable degree. Finished manufactures, however, probably constitute the economic class of goods in which the largest air cargo potential is to be found, although much of the traffic cannot be practicably or economically carried by air. Even in the case of some relatively valuable com-

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Gold, All Securities including non-negotiables All Other documents and

UNITED STATES or CANADA to or

1.

2. 3. 5

STATES OF CANADA to OF Irom:	similar	interests interests
(a) British Isles, Eire, Sweden, Denmark, Norway Italy, France, Portugal, Spain, Switzerland, Iceland and Greenland		44% 2½4%
(b) Finland, Germany (exc. Berlin), Austria, Trieste		54% 104%
shipments only		0¢% 20¢%
(d) Greece, Cyprus, Turkey		24% 54%
. (a) Africa except Egypt		24% 24%
(b) Egypt	21/2	2€% 5€%
(a) Palestine, Syria, Lebanon		26% 154%
(b) Transjordan		0¢% 20¢%
Afghanistan, Iraq, Iran, Saudi Arabia		5¢% 5¢%
(a) India, Pakistan, Burma		56% 106%
(b) Ceylon		54%
. Australia, Guam, Samoa		66% 21/26%
(a) Malaya, Thailand, Hong Kong, Kowloon, Korea		14% 71/20%
(b) Philippines, Japan, Okinawa		24% 54%

C-Ordinary Parcel Post, Government Insured Parcel Post, Registered Post, Ordinary Mail (Excluding Air Mail)

(A) United States to from Mexico 2½€%, provided assured agrees to pay reduced rate on all shipments, otherwise individual shipments at full cargo schedule rate.
 (B) United States or Canada to or from Hawaiian Islands—Transpacific Cargo Rate.

D-Express (Excluding Air Express)-Charge Cargo War Risk Schedule Rates.

modities in this category, the competitive steamship rates are far below those which airlines could be expected to meet in the foreseeable future, even after allowing for the higher speed and other benefits unique in air transport. It is understood, of course, that emergency shipments will move by air regardless of their value or the carrier's rates.

The field of valuable cargo offers the best prospects for overseas air cargo potential. The higher the value of a commodity, the smaller, generally speaking, is the proportion which freight rates are of its total price, and the greater its ability to bear the relatively high rates of airlines without restricting the sale and marketing area of the commodity. Recent data on the quantity of "valuable" (used in this report in the sense of "highly valuable") cargo represented in United States foreign trade are not readily available, but much can be learned from a study prepared for the Air Transport Association of America covering foreign trade in 1939. Highvalued commodities were defined in that study as those with values in excess of \$1,000 per short ton (50 cents a pound). That lower limit, admittedly somewhat arbitrary, was selected to include most of the best prospects for air cargo but yet to be high enough to prevent dispersal of promotional effort by the airlines. It was found that in 1939, of commodities averaging \$1,000 per ton or higher, exports to areas outside-North America totaled 106,677 tons, or 0.45 per cent of the total tonnage of dry cargo exports of the United States. The value represented by that tonnage was \$190,049,000, which represented 8.63 per cent of the total value of United States dry cargo exports.

Total imports from areas outside of North America of commodities averaging \$1,000 per ton or higher in value, excluding such highly valued commodities as diamonds and watches, which could not be reduced to a weight basis, were 125,712 tons valued at \$323,636,000. These amounts were 0.72 per cent and 22.8 per cent of the aggregate tonnage and value of United States imports of dry cargoes during 1939, respectively.

Steamship lines and airlines are the only competitors for the transportation of goods between continental United States and areas outside of North America.

First, port-to-port air cargo rates are always higher than port-to-port steamship cargo rates, with the differential between the two rising with increases in the distance of shipment. . . In general terms, air cargo rates appear to be most nearly competitive with steamer rates over the shorter distances, and the least competitive over the longer distances.

It has been estimated that the average ocean freight rate on dry cargoes in the overseas foreign trade of the United States was slightly more than two mills per ton-mile in 1939. Outbound rates on general cargo in some steamship conferences (e.g. North Atlantic-United Kingdom, and River Plate -Brazil) have approximately doubled since 1939. If it is assumed that the average ocean freight rate on dry cargoes is now twice that estimated for 1939, the following offers a basis for comparison of air and steamship cargo revenues per ton-mile as of the third quarter of 1948: Average

Item revenue per ton-mile
Ocean transportation: \$0.004
Air transportation: \$0.004
Air transportation: \$413
United States certificated "international and overseas" carriers (scheduled service) ... 473
Second, minimum charges per shipment are usually higher in steamship transport than in air transport. Thus airlines have a competitive advantage

weight shipments on which the aggregate air charges are less than the steamship minimum charge.

Finally, it may be noted that air nonconference rates are generally lower than air conference rates, though the difference is far more significant with respect to competition among airlines

over steamship lines in those light-

than between airlines and steamship companies.

After comparative airline and steamship charges per ton for relatively valuable commodities are ascertained . . . it becomes apparent that the differential between the two transport media



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in this respect is far less marked than would be indicated by a casual appraisal of rates on general cargo. In fact . . . the ratio in charges may be as low as approximately four to one in a few cases, though the differential is greater in most of the cases shown above. Over shorter distances, the differential between air and steamship charges per ton might be less than four to one in some cases, since airline ton-mile charges are often lower on relatively short hauls. However, the majority of valuable commodities which move by air probably are transported at rates considerably more than four times as high as steamship rates.

An example of the competitive rate levels in short-distance shipments is in the movement of textiles from Miami to Havana. While the steamship conference tariff does not use the designation, "textiles," its tariff rates on dry goods range from \$0.48 to \$1.20 per cubic foot and as high as \$3 per 100 pounds. At stowage factors above 125, the lowest per-cubic-foot steamship rate (48 cents) would produce charges higher than the \$60 per short ton quoted by Pan American (three years ago). The highest steamship rate on dry goods (\$3 per 100 pounds), it will be noted, is equivalent to the airline's charge, without any allowance for the fact that the steamship charges might be considerably higher if assessed on a measurement basis. Steamship stowage factors on textiles and dry goods vary widely, from approximately 62 to 283, depending on the individual article.

Another example involving a relatively short haul is the movement of coffee from Guatemala to New Orleans. Skytrain Airways, a noncertificated irregular carrier (currently not in operation) has quoted a rate of three cents a pound on green coffee, Guatemala City to New Orleans, which is equivalent to \$60 per short ton. This may be compared with the nonconference rate of \$16 per ton. weight or measurement, from San Jose, Guatemala to New Orleans offered by United Fruit Company, a steamship line, according to the latest tariff filed with the U. S. Maritime Commission. The steamship stowage factor on this commodity is 57 (or approximately 51 on a short-ton basis), so that the steamship charges per short ton would be approximately \$20.40, more than a third the airline charges of \$60.

It should be pointed out that the airline rate of three cents a pound on green coffee quoted above is an extraordinarily low rate, no doubt induced in part by the need to increase northbound tonnage to a level more nearly commensurate with the volume of southbound traffic from the United States.

(Continued next month)

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